

CONDENSERS		Values (μF)
C1	Aerial series condenser ...	0.0002
C2	Aerial MW top coupling ...	0.000005
C3	V1 hex. and T.I. CG's decoupling	0.05
C4	V1 SG decoupling ...	0.1
C5	V1 cathode by-pass ...	0.1
C6	V1 osc. CG condenser ...	0.0001
C7	Osc. circ. SW1 tracker	0.01
C8	Osc. circ. SW2 tracker	0.00365
C9	V1 osc. anode coupling	0.0005
C10	V2 CG decoupling ...	0.05
C11	V2 SG decoupling ...	0.1
C12	V2 cathode by-pass ...	0.1
C13	1F by-pass ...	0.0001
C14	Coupling to V3 AVC diode	0.000075
C15	1F by-pass ...	0.0001
C16	AF coupling to V3 triode ...	0.005
C17*	V3 triode anode decoupling	8.0
C18*	V3 cathode by-pass ...	25.0
C19	V3 triode to V4 AF coupling	0.01
C20	Fixed tone corrector ...	0.005
C21*	V4 cathode by-pass ...	25.0
C22	Part of variable tone control	0.02
C23*	HT smoothing condensers	16.0
C24*	HT circuit RF by-pass	16.0
C25	Parts of rectifier circuit RF filter	0.1
C26	filter ...	0.01
C27	Mains aerial coupling	0.0001
C28		
C29†	Aerial SW1 trimmer	0.00003
C30†	Aerial SW2 trimmer	0.00003
C31†	Aerial MW trimmer	0.00003
C32†	Aerial LW trimmer	0.00003
C33†	Aerial circuit tuning	0.0005
C34†	Oscillator circuit tuning	0.0005
C35†	Osc. circuit SW1 trimmer	0.00003
C36†	Osc. circuit SW2 trimmer	0.00003
C37†	Osc. circuit MW trimmer	0.00003
C38†	Osc. circuit LW trimmer	0.00003
C39†	Osc. circuit MW tracker	0.0006
C40†	Osc. circuit LW tracker	0.0003
C41†	1st IF trans. pri. tuning	0.00025
C42†	1st IF trans. sec. tuning	0.00025
C43†	2nd IF trans. pri. tuning	0.00025
C44†	2nd IF trans. sec. tuning	0.00025

* Electrolytic. † Variable. ‡ Pre-set.

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in

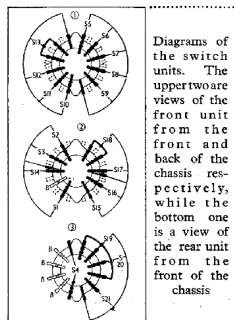
Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 ECH3	216 Oscillator	2.2 4.7	99	2.0
V2 EF9	216	4.8	82	1.5
V3 EBC3	158	2.6	—	—
V4 EL6	191	65.0	216	7.3
V5 AZ2	288†	—	—	—
T.I. EM1	17 Target	0.1 0.37	—	—

†Each anode, AC.

OTHER COMPONENTS

L1	Aerial SW1 coupling coil ...	0.2
L2	Aerial SW2 coupling coil ...	0.2
L3	Aerial MW and LW coupling coil ...	38.0
L4	Aerial SW1 tuning coil ...	Very low
L5	Aerial SW2 tuning coil ...	0.2
L6	Aerial MW tuning coil ...	1.4
L7	Aerial LW tuning coil ...	14.0
L8	Osc. circuit SW1 tuning coil	Very low
L9	Osc. circuit SW2 tuning coil	0.2
L10	Osc. circuit MW tuning coil	3.0
L11	Osc. circuit LW tuning coil	9.5
L12	Oscillator SW1 reaction	18.0
L13	Oscillator SW2 reaction	0.4
L14	Oscillator MW reaction	30.0
L15	Oscillator LW reaction	50.0
L16	1st IF trans. (Pri. ...)	4.5
L17	1st IF trans. (Sec. ...)	4.5
L18	2nd IF trans. (Pri. ...)	4.5
L19	2nd IF trans. (Sec., total ...)	4.5
L20	Speaker speech coil ...	1.5
L21	Hum neutralising coil ...	0.2
L22	Speaker field coil ...	700.0
T1	Speaker input	350.0
	trans. (Pri. ...)	0.3
	trans. (Sec., total ...)	15.0
T2	Mains trans. (Heater sec. ...)	0.05
	Rect. heat sec. ...	0.1
	HT sec., total ...	130.0
S1-S20	Waveband switches	—
S21	Gram. pick-up switch	—
S22	Mains switch, ganged R23...	—

Approx. Values (ohms)



SWITCH TABLE

Switch	SW1	SW2	MW	LW	Gram
S1					
S2					
S3					
S4					
S5					
S6					
S7					
S8					
S9					
S10					
S11					
S12					
S13					
S14					
S15					
S16					
S17					
S18					
S19					
S20					
S21					

CIRCUIT ALIGNMENT

IF Stages.—Short-circuit C34, and connect signal generator, via a 0.1μF condenser, to control grid (top cap) of V1 and chassis. Feed in a 470 KC/S signal, and adjust C44, C43, C42 and C41 in turn for maximum output. Recheck these settings, then remove short from C34.

RF and Oscillator Stages.—With gang at maximum, pointer should be horizontal. Connect signal generator, via a suitable dummy aerial, to A and E sockets.

MW.—Switch set to MW, tune to 250m on scale, feed in a 250m (1,200 KC/S) signal, and adjust C37, then C31, for maximum output. Feed in a 500m (600 KC/S) signal, tune it in, and adjust C39 for maximum output, while rocking the gang for optimum results. Repeat the 250m adjustments.

LW.—Switch set to LW, tune to 1,300m on scale, feed in a 1,300m (233 KC/S) signal, and adjust C38, then C32, for maximum output. Feed in a 1,900m (158 KC/S) signal, tune it in, and adjust C40 for maximum output, while rocking the gang for optimum results. Repeat the 1,300m adjustments.

SW1.—Switch set to SW1, tune to 25m on scale, feed in a 25m (12 MC/S) signal, and adjust C35, then C29, for maximum output. Tracking is fixed.

SW2.—Switch set to SW2, tune to 50m on scale, feed in a 50m (6 MC/S) signal, and adjust C36, then C30, for maximum output. Tracking is fixed.

our receiver when it was operating on mains of 225 V using the 210-230 V tapping on the mains transformer. The

receiver was tuned to the lowest wavelength on the MW band, and the volume control was at maximum, but there was no signal input.

Voltages were measured on the 400 V scale of a model 7 Universal Avometer, chassis being negative.